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An Unusual Treatment for Massive and Refractory Bleeding after Endoscopic Retrograde Cholangiopancreatography

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A 52-year-old woman with a history of laparoscopic cholecystectomy within the past 2 weeks, presented to the emergency department with abdominal pain and icter from 2 days earlier. She complained of an epigastric pain with radiation to the back, which was aggravated after taking a meal and did not change with position.

Her vital signs at admission were as below:

Blood pressure: 120:100 mmHg, pulse rate: 68 per minute, respiratory rate: 14 per minute, body temperature from oral root: 36.7 °C.

In general appearance she looked ill and her sclera was icteric. In physical examination of the abdomen, epigastric tenderness was noticed. There were no signs of guarding and rigidity.

Description of previous problems indicated no previous hemorrhage, coagulation disorder, or taking of a specific drug.

Her laboratory findings at admission are summarized in table 1.

With respect to her clinical condition and a suspicious common bile duct (CBD) stone, magnetic resonance cholangiopancreatography (MRCP) was performed, which showed a dilated CBD with a diameter of 10 mm and a CBD stone with a diameter of 6 mm that was an indication for endoscopic retrograde cholangiopancreatography (ERCP) (figure 1).

During ERCP, severe bleeding occurred following sphincterotomy for removing the stone. Initial treatment was performed by sclerotherapy but re-bleeding occurred for 3 times, at 8, 12, and 24 hours after ERCP, of them the third one led to hemodynamic instability. After resuscitation with intravenous normal saline and fresh frozen plasma (FFP) infusion, she underwent endoscopic treatment. All efforts including local injection of normal saline, injection of epinephrine, argon plasma coagulation (APC), and hemoclip failed to control the bleeding. A full-cover stent was placed inevitably and saline irrigation continued so that the pressure effect of the stent on the ampulla of Vater and the site of bleeding might stop the hemorrhage (figure 2). The hemorrhage fortunately stopped and the patient was transferred to intensive care unit (ICU). No complication arose

Table 1: Laboratory findings at admission

Laboratory parameter	Measured value	Normal values	Measuring unit
Amylase	69	< 100	IU/L
LDH	683	122 - 222	IU/L
SGOT	141	10 - 35	IU/L
SGPT	172	10 - 45	IU/L
ALP	324	98 - 279	IU/L
Total bilirubin	6.3	0.2 - 1.2	mg/dL
Direct bilirubin	5.7	0.1 - 0.4	mg/dL
Total CPK	31	10 - 450	IU/L
BUN	11.2	6 - 20	mg/dL
Creatinine	0.5	0.5 - 1.2	mg/dL
BS	141	< 200	g/dL
P	1.8	2.5 - 4.5	mg/dL
Na	136	135 - 145	mEq/L
K	3.9	3.6 - 5	mEq/L

LDH; Lactate dehydrogenase, SGOT; Serum glutamic oxaloacetic transaminase, SGPT; Serum glutamic pyruvic transaminase, ALP; Alkaline phosphatase, CPK; Creatine phosphokinase, BUN; Blood urea nitrogen, BS; Blood sugar, P; Phosphorus, Na; Sodium, K; Potassium

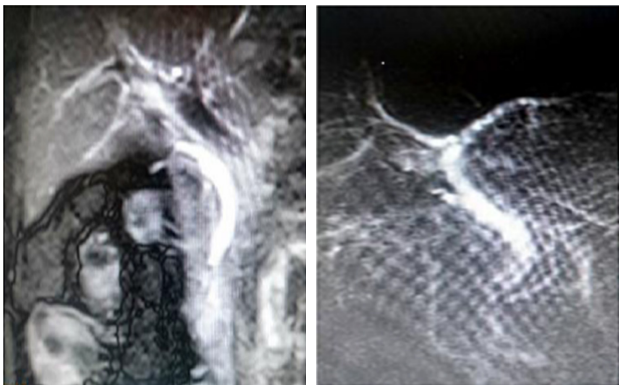

Fig.1: Magnetic resonance cholangiopancreatography shows a dilated common bile duct.

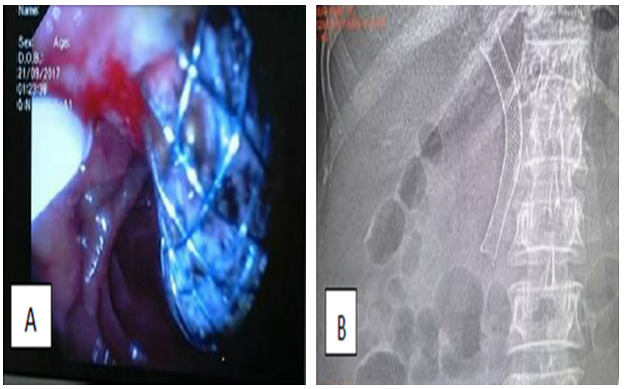

Fig.2: A and B: The stent that was used to control bleeding.

and the patient was discharged with a good general condition. The stent was removed 2 weeks later and no signs of hemorrhage were observed within 1-month follow-up period.

What is your diagnosis?

Answer:

Bleeding from the site of sphincterotomy is common especially in therapeutic ERCPs and mostly are self-limited. In the present case, severe and refractory bleeding seemed to be from an aberrant artery at the location of sphincterotomy.

DISCUSSION

In multivariant studies, risk factors for the post ERCP bleeding are defined as: coagulative disorders (PT > 1.5 N), administration of anticoagulants within 72 hours before and after ERCP, hemodialysis, presence of an acute cholangitis or stenosis, precut sphincterotomy, and poor experience of the operator.[1,2]

Bleeding at the beginning of the operation may increase the possibility of latent bleeding. Presence of hepatic cirrhosis without coagulative disorder may not increase the probability of bleeding and administration of non-steroidal medicines plays no important role in the onset of bleeding.[3,4]

Precut sphincterotomy and papillary stenosis are independent risk factors.[5] Moreover, zipper cut and needle-knife sphincterotomy have been put forth as independent factors in a study carried out in Korea.[6]

Prevention of post ERCP bleeding includes identification of the patient's risk factors, being careful of the coagulative status of the patients, and accurate adoption of the proper ERCP methods. Post sphincterotomy bleeding may be self-limited. In case of a necessity for a primary therapeutic intervention, epinephrine with a concentration of 1:100000 may be sprayed at the location followed by injection with a concentration of 1:10000. In case of failure to stop bleeding, the next steps include: mechanical pressure with balloon, electrocautery, and APC. Angiography and surgical intervention are the last methods, if all previous interventions fail to control bleeding.[7]

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ETHICAL APPROVAL

There is nothing to be declared.

CONFLICT OF INTEREST

The authors declare no conflict of interest related to this work.

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